

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~striketrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

1. (CURRENTLY AMENDED) An image data processing apparatus comprising:
a dividing unit that divides image data into a plurality of blocks;
a block extracting unit that extracts a pair of blocks from the divided blocks;
an index extracting unit that extracts ~~outputs a feature index~~ two feature indices of a first color component and ~~a feature index~~ two feature indices of a second color component which differs from the first color component from ~~the divided blocks~~ pair of blocks, one of the two feature indices being extracted from one of the pair of blocks and the other of two feature indices being extracted from the other of the pair blocks; and
a code embedding unit that embeds a code into the ~~divided block of image data~~ pair of blocks, by changing at least one of the extracted ~~feature index~~ two feature indices of the first color component of the pair of blocks based on a magnitude relationship between ~~at least one of the extracted feature index~~ two feature indices of the second color component of the pair of blocks and ~~information about correspondence between the one of the extracted feature index~~ a value determined by at least one of the extracted two feature indices of the second color component ~~and a change of the feature index of the first color component~~.
2. (CANCELLED)
3. (CANCELLED)
4. (ORIGINAL) The image data processing apparatus according to claim 1, wherein the first color component is a yellow component.
5. (ORIGINAL) The image data processing apparatus according to claim 4, wherein the second color component is a magenta component.

6. (ORIGINAL) The image data processing apparatus according to claim 1, further comprising a code extracting unit that extracts the code embedded into the image data.

7. (CURRENTLY AMENDED) An image data processing method comprising:
dividing image data into a plurality of blocks;
extracting a pair of blocks from the plurality of blocks;
extracting ~~a feature index~~ two feature indices of a first color component and ~~a feature index~~ two feature indices of a second color component which differs from the first color component from the ~~divided blocks~~ pair of blocks, one of the two feature indices being extracted from one of the pair of blocks and the other of the two feature indices being extracted from the other of the pair of blocks; and

embedding a code into the pair of blocks of the image data, by changing at least one of the extracted ~~feature index~~ two feature indices of the first color component of the pair of the blocks based on a magnitude relationship between at least one of the extracted feature index two feature indices of the second color component of the pair of blocks and ~~information about correspondence between the one of the extracted feature index~~ a value determined by at least one of the extracted two feature indices of the second color component ~~and a change of the feature index of the first color component~~.

8. (CANCELLED)

9. (CANCELLED)

10. (ORIGINAL) The image data processing method according to claim 7, wherein the first color component is a yellow component.

11. (ORIGINAL) The image data processing method according to claim 10, wherein the second color component is a magenta component.

12. (ORIGINAL) The image data processing method according to claim 7, further comprising extracting the code embedded into the image data.

13. (CURRENTLY AMENDED) A computer-readable recording medium that stores a program that, when executed, makes a computer perform a process comprising:

dividing image data into a plurality of blocks;

extracting a pair of blocks from the divided block;

extracting ~~a feature index~~ two feature indices of a first color component and ~~a feature index~~ two feature indices of a second color component which differs from the first color component from the ~~divided blocks~~ pair of blocks, one of the two feature indices being extracted from one of the pair of blocks and the other of the two feature indices being extracted from the other of the pair of blocks; and

embedding a code into the pair of blocks of the image data, by changing at least one of the extracted ~~feature index~~ two feature indices of the first color component of the pair of blocks based on a magnitude relationship between at least one of the extracted feature index ~~two feature indices~~ of the second color component of the pair of blocks ~~about correspondence between the one of the extracted feature index~~ a value determined by at least one of the extracted two feature indices of the second color component ~~and the changing value of the first feature index for the first color component~~.

14. (CANCELLED)

15. (CANCELLED)

16. (PREVIOUSLY PRESENTED) The computer-readable recording medium according to claim 13, wherein the first color component is a yellow component.

17. (PREVIOUSLY PRESENTED) The computer-readable recording medium according to claim 16, wherein the second color component is a magenta component.

18. (PREVIOUSLY PRESENTED) The computer-readable recording medium according to claim 13, further making the computer perform extracting the code embedded into the image data.

19. (PREVIOUSLY PRESENTED) An image data processing apparatus comprising:
a code embedding unit that embeds a code into a pair of blocks of image data by changing at least a feature index of a first color component of a block of the pair of blocks based on a magnitude relationship between the feature indices of color components related to the pair

of blocks.

20. (PREVIOUSLY PRESENTED) An image data processing method comprising:
pairing blocks of image data; and
embedding a code into the paired blocks by changing at least a feature index of a first color component of a block of the paired of blocks based on a magnitude relationship between the feature indices of the first color component and second color component which differs from the first color component of the paired blocks.

21. (CURRENTLY AMENDED) An embedding unit that is included in an image data processing apparatus which includes:

a dividing unit that divides image data into a plurality of blocks;
a block extracting unit that extracts a pair of blocks from the divided block; and
an index extracting unit that extracts ~~a feature index~~ two feature indices of a first color component and ~~a feature index~~ two feature indices of a second color component which differs from the first color component from the ~~divided block~~ pair of blocks, one of the two feature indices being extracted from one of the pair of blocks and the other of two feature indices being extracted from the other of the pair of blocks, wherein

~~the code embedding unit embeds a code into the divided block of the image data~~ pair of blocks, by changing at least one of the extracted ~~feature index~~ two feature indices of the first color component of the pair of blocks based on a magnitude relationship between ~~at least one of the extracted feature index~~ two feature indices of the second color component of the pair of blocks and ~~information about correspondence between the one of the extracted feature index~~ a value determined by at least one of the extracted two feature indices of the second color component ~~and a change of the feature index of the first color component~~.

22. (CURRENTLY AMENDED) A method of embedding a code into an image data in an image data processing method, comprising:

dividing the image data into a plurality of blocks;
extracting a pair of blocks from the plurality of blocks; and
extracting ~~a feature index~~ two feature indices of a first color component and ~~a feature index~~ two feature indices of a second color component which differs from the first color component from the ~~divided blocks~~ pair of blocks, one of the two feature indices being extracted from one of the pair of blocks and the other of the two feature indices being extracted from the

other of the pair of blocks, wherein

the embedding includes embedding the code into the pair of blocks of the image data, by changing at least one of the extracted ~~feature-index-two feature indices~~ of the first color component of the pair of the blocks based on a magnitude relationship between at least one of the extracted feature-index-two feature indices of the second color component of the pair of blocks and ~~information about correspondence between the one of the extracted feature-index a value determined by at least one of the extracted two feature indices~~ of the second color component ~~and a change of the feature index of the first color component~~.

23. (PREVIOUSLY PRESENTED) A method of pairing blocks of image data in an image data processing method, comprising:

pairing blocks of image data; and

embedding a code into the paired blocks by changing at least a feature index of a first color component of a block of the paired of blocks based on a magnitude relationship between the feature indices of the first color component and second color component which differs from the first color component of the paired blocks.

24. (CURRENTLY AMENDED) A computer-readable recording medium that stores a program, that when executed, makes a computer perform embedding a code into image data comprising:

dividing the image data into a plurality of blocks;

extracting a pair of blocks from the divided block; and

extracting ~~a feature-index-two feature indices~~ of a first color component and ~~a feature index-two feature indices~~ of a second color component which differs from the first color component from the ~~divided blocks~~ pair of block, one of the two feature indices being extracted from one of the pair of blocks and the other of the two feature indices being extracted from the other of the pair of blocks, wherein

the embedding includes embedding the code into the pair of blocks of the image data, by changing at least one of the extracted ~~feature-index-two feature indices~~ of the first color component of the pair of blocks based on a magnitude relationship between at least one of the extracted feature-index-two feature indices of the second color component of the pair block ~~blocks and information about correspondence between the one of the extracted feature-index a value determined by at least one of the extracted two feature indices~~ of the second color component ~~and the changing value of the first feature index for the first color component~~.